

## **IN THE SUBSTITUTE SPECIFICATION**

Please cancel paragraphs 010, 012, 015, 018, 019, 022, 024, 025, 028, 033, 052 and 054 of the Substitute Specification which was filed with the Preliminary Amendment of February 17, 2005. Please replace the cancelled paragraphs with replacement paragraphs 010, 012, 015, 018, 019, 022, 024, 025, 028, 033, 052 and 054, as follows.

**[010]** The object of the present invention is directed to providing  
devices~~providing devices~~ for use in pressing a dressing on a cylinder of a printing press with the aid of first and second rolling elements, which first and second rolling elements are spaced apart from each other in the circumferential direction of the cylinder, and to a method for tightening or bracing or for slackening or removing such a dressing.

**[012]** The advantages to be gained by the present invention consist, in particular, in that the device can be constructed to be very flat, and therefore is configured in a space-saving manner, which is very advantageous because of~~because of~~ the existing structural conditions of a printing press. A preferably layered arrangement of the supports for the dressing elements results in that the device can also be constructed in a very compact manner in the circumferential direction of the cylinder. In spite of the use of rolling elements, which are arranged one behind the other in the circumferential

direction of the cylinder, the total of two lever arms placed in series is not required as the structural space. Such required structural space is only slightly more than the length of one lever arm.

**[015]** In addition to the fact that by the use of the arrangement of the supports and rolling elements, in accordance with the present invention, that a very flat structural shape is achieved, other functional advantages arise from the tandem arrangement of the rolling elements. Thus, dressings resting on the surface area of the cylinder can remain fixed in place as needed by use of the first rolling element, although the second rolling element also releases an end of a dressing or ends of several dressings, i.e. does not press them on at this time. If, with respect~~with respect~~ to a particular dressing, the first and the second rolling elements are placed against the cylinder, advantageous friction values and guide conditions result for delivering and transporting this dressing.

**[018]** Shown are in:

Fig. 1, a schematic depiction of a side elevation view of a device for pressing a dressing against a cylinder of a printing press with the aid of rolling elements in

accordance with the present invention, in

Fig. 2 to Fig. 4, schematic side elevation views showing the progression of a method for bracing or tightening a flexible dressing on a cylinder of a printing press with the aid of rolling elements which are arranged on elastically bendable supports, all in accordance with the present invention, in

Figs. 5 and 6, schematic side elevation views and showing a method step utilized when releasing a flexible dressing from a cylinder of a printing press with the aid of rolling elements arranged on elastically bendable supports, [[and]] in

Fig. 7, a schematic depiction of one arrangement of an assignment of separate ones of rolling elements, arranged on second supports, to several dressings applied side-by-side on a cylinder while one of these dressings is being removed, all in accordance with the present invention[[.]], and in

Fig. 8, a schematic depiction, in a perspective view, of a cylinder configured with the device for pressing dressings against the cylinder, the cylinder being configured to receive two dressings circumferentially and six dressings axially.

**[019]** Referring initially primarily to Fig. 1, a dressing 01 is brought to a cylinder 02 of a

printing press, for example to a cylinder 02 of a web-fed rotary offset printing press by suitable apparatus, which is not specifically shown. The dressing 01 can be, for example, a flexible dressing, and, in particular, can be an elastically flexible printing forme 01, which is to be placed on a forme cylinder 02. A suspension leg 03a, which is beveled or angled off at a leading end of the dressing 01, is suspended, and preferably is positively connected, to a cooperatively configured first wall 04 of a preferably slit-shaped opening 07 that is cut into or is otherwise provided in a surface area 06 of the cylinder 02. If the dressing 01 extends over the entire circumference of the cylinder 02, a single such opening 07, as depicted in Fig. 1, in the cylinder 02 may be sufficient. In a situation of several dressings 01, which are to be applied in the circumferential direction of the cylinder 02, as may be seen in Fig. 8, several, preferably identically configured openings 07 are located in the cylinder 02 in an arrangement where these several axially extending, essentially identical openings 07 are offset along the cylinder circumference. With two dressings 01 situated in the circumferential direction of cylinder 02, the two required openings 07 are arranged circumferentially offset by 180°, with respect to each other, for example. In this case of two dressings 01, a suspension leg 03a at the leading end of the one dressing 01 is fastened in the first opening 07, as

seen in Fig. 1 while a suspension leg 03b at the trailing end of the same dressing 01 is fastened in the other opening 07, which is not specifically represented in Fig. 1. With a 6/2 printing press, the preferred arrangement of dressings consists of two dressings 01 in the circumferential direction of the cylinder 02, and six side-by-side arranged dressings 01 in the axial direction of the cylinder 02.

**[022]** For use in placing the rolling elements 31, 32 against the cylinder 02 or for moving them away from it, a first actuation device 33, acting on the first element 22, and a second actuating device 34, acting on the second support 26, are provided. The first actuating device 33, and the second actuating device 34 can be actuated independently of each other. The achievement of such an independent placement of the rolling element 31, 32 against or away from the cylinder, by use of the independently operable actuating devices 33, 34 is of particular benefit when several dressings 01 have been arranged side-by-side in the axial direction on the cylinder 02, and it is intended to selectively clamp or to release these dressings 01 individually. During the removal of a single dressing 01, for example, the remaining dressings 01 can be securely maintained on the cylinder 02 by the use of rolling elements 31, ~~32~~<sup>33</sup>

appropriately placed against them even if a common holding member 12 of a holding device, which holding member 12 is arranged for concurrently holding several dressings 01, is opened and thus releases the fastening of several of the dressings 01 situated on the cylinder 02.

**[024]** It is of particular advantage to embody each of the supports 22, 26 in the form of an elastically bendable, preferably reversibly deformable body, and in particular, in the shape of a blade, for example as a resilient sheet metal piece 22, 26. If, by operating an associated actuating devices 33, 34, an associated one of the supports 22, 26 can be elastically bent, for placing a rolling element 31, 32 against the cylinder 02, no additional devices are required for moving the rolling elements 31, 32 arranged on the supports 22, 26 away from the cylinder after an actuation of the associated actuating device 33, 34 has ceased. In this preferred embodiment, the supports 22, 26 each spring back into their original positions without the further imposition of forces acting from the outside.

**[025]** The rolling elements 31, 32 can each be embodied as a rolling element 31, 32

or as a roller 31, 32. Several such first supports 22, each with at least one first rolling element 31, can be arranged side-by-side on the cross arm 21, in the axial direction of cylinder 02, wherein these first rolling elements 31 can each be placed against or can be moved away from the cylinder 02 independently of each other. Such movement of the several axially side-by-side arranged first rolling elements 31 can either be accomplished individually or in groups by the appropriate actuation of the first actuating device 33 assigned to each of the supports 22. In the same way, it can be advantageous to arrange several second supports 26, each with at least one second rolling element 32, side-by-side axially with respect to cylinder 02 on the first support 22. These second rolling elements 32 can be placed against or can be moved away from the cylinder 02 independently of each other also either individually or in groups by the appropriate actuation of the second actuating device 34 assigned to each of the supports 26. A preferred embodiment of the present invention provides that one first roller 31, extending axially along the cylinder 02, and that several second supports 26, each with at least one rolling element 32, are arranged on the first support 22. This embodiment becomes particularly useful in the case where the cylinder 02 has several dressings 01 located side-by-side on its cylinder surface area 06, and a second support

26, each with at least one second rolling element 32, is assigned to each dressing 01.

**[028]** While the first and second rolling elements 31, 32 are all moved away from the surface area 06 of the cylinder 02, ~~a suspension~~<sup>a suspension</sup> leg 03a located at the leading end of the dressing 01 is brought, preferably tangentially, against the surface area 06 of the cylinder 02 and is suspended on the first wall 04 of the opening 07 that is cut into the surface area 06 of the cylinder 02, as may be seen in Fig. 1.

**[033]** A method for releasing a flexible dressing 01 from a cylinder 02 of a printing press in accordance with the present invention, with the aid of rolling elements 31, 32 arranged on preferably elastically bendable supports 22, 26 is depicted in Figs. 5 and 6. A first rolling element 31 is arranged on a first support 22, and a second rolling element 32 is arranged on a second support 26. Both of these first and second rolling elements 31, 32 are arranged spaced apart from each other in the circumferential direction of the cylinder 02. Several dressings 01 can be arranged side-by-side in the axial direction on the cylinder 02, as seen in Fig. 8. Each dressing 01 has suspension legs 03a, 03b beveled off its ends. The cylinder 02 has at least one opening 07 cut into its surface



area 06 and this opening 07 has a first wall 04 and a second wall 17. The opening 07 leads to a channel 08 arranged extending axially in the cylinder 02 and with a holding device with a holding member 12 arranged in channel 08. The holding member 12 of the holding device has a holding position and a release position as its operating positions. This method is represented in Figs. 5, 6 and 7 and is distinguished by the following method steps:

**[052]** The second rolling element 32 arranged on the second support 26 is moved away from the cylinder 02 at the trailing end of a dressing 01 to be removed. The suspension ~~The suspension~~ leg 03b at the trailing end of the dressing 01 to be removed is released from the opening 07 because of its internal tension, while the dressing 01 itself remains fixed in place on the surface area 06 of the cylinder 02 because of the pressure of the first rolling element 31. The trailing end of the dressing 01 to be removed tries to assume a stretched-out length, wherein this end of the dressing 01 now remains in contact with the second rolling element 32 over a defined spring travel while springing out of the opening 07. Therefore, the end of the dressing 01 springing out of the opening 07 follows the second rolling element 32 as it is being lifted off the

cylinder 02. The suspension legs 03b of the remaining dressings 01 remain in the opening 07, because the ends of these dressings 01 remain pressed against the surface area 06 of the cylinder 02 by the second rolling element 32 assigned to them. The length of a released end of a dressing 01 to be removed from the cylinder 02 is defined by the distance of the contact point of the first rolling element 31 from the opening 07.

**[054]** A method for bracing or tightening a flexible dressing 01 on a cylinder 02 of a printing press, with the aid of first and second rolling elements 31, 32, in which a first rolling element 31 and a second rolling element 32 are provided, and in which both rolling elements 31, 32 are arranged spaced apart from each other in the circumferential direction of the cylinder 02, and in which several dressings 01 are arranged side-by-side in the axial direction of cylinder 01, can also be distinguished in that the first and second rolling elements 31, 32 are individually or are in groups placed against the dressings 01 resting on the surface area 06 of the cylinder 02 or are moved away from the surface area 06 of cylinder 02.